

## CLAIMS LISTING

1. (currently amended) A binderless storage phosphor panel or screen comprising a vacuum deposited phosphor layer on an exposure side (1) of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 400 p.p.m. versus CsBr, on a support (2) and wherein said support includes a layer of amorphous carbon (23) opposite to said exposure side.
2. (original) A binderless storage phosphor panel or screen comprising a vacuum deposited phosphor layer (1) of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 200 p.p.m. versus CsBr, on a support (2) and wherein said support includes a layer of amorphous carbon (23).
3. (original) A binderless phosphor panel or screen according to claim 1, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.
4. (original) A binderless phosphor panel or screen according to claim 2, wherein said support further includes a

polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

5.(original) A binderless phosphor panel or screen according to claim 1, wherein said support further includes a reflective auxiliary layer (22).

6.(original) A binderless phosphor panel or screen according to claim 2, wherein said support further includes a reflective auxiliary layer (22).

7.(original) A binderless phosphor panel or screen according to claim 3, wherein said support further includes a reflective auxiliary layer (22).

8.(original) A binderless phosphor panel or screen according to claim 4, wherein said support further includes a reflective auxiliary layer (22).

9.(original) A binderless phosphor panel or screen according to claim 5, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .

10.(original) A binderless phosphor panel or screen according to claim 6, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .

11.(original) A binderless phosphor panel or screen according to claim 7, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .

12.(original) A binderless phosphor panel or screen according to claim 8, wherein said reflective auxiliary layer (22) is an aluminum layer with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .

13.(original) A binderless phosphor panel or screen according to claim 5, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

14.(original) A binderless phosphor panel or screen according to claim 6, wherein said support further includes a

protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

15.(original) A binderless phosphor panel or screen according to claim 7, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

16.(original) A binderless phosphor panel or screen according to claim 8, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

17.(original) A binderless phosphor panel or screen according to claim 9, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

18.(original) A binderless phosphor panel or screen according to claim 10, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

19.(original) A binderless phosphor panel or screen according to claim 11, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

20.(original) A binderless phosphor panel or screen according to claim 12, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

21.(original) A binderless phosphor panel or screen according to claim 13, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

22.(original) A binderless phosphor panel or screen according to claim 14, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

23.(original) A binderless phosphor panel or screen according to claim 15, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

24.(original) A binderless phosphor panel or screen according to claim 16, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

25.(original) A binderless phosphor panel or screen according to claim 17, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

26.(original) A binderless phosphor panel or screen according to claim 18, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

27.(original) A binderless phosphor panel or screen according to claim 19, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

28.(original) A binderless phosphor panel or screen according to claim 20, wherein said protective auxiliary layer is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

29.(original) A method for producing a binderless storage phosphor panel comprising the steps of :

- providing an amorphous carbon film,
- vacuum depositing a storage phosphor layer of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 400 p.p.m. versus CsBr, on said amorphous carbon film and, optionally,
- laminating method a polymeric film on the side of the amorphous carbon film not covered by said phosphor.

- 30.(original) A method for producing a binderless storage phosphor panel comprising the steps of :
- providing an amorphous carbon film,
  - vacuum depositing a storage phosphor layer of CsBr:Eu, wherein amounts of Eu-dopant are in the range of from 100 up to 200 p.p.m. versus CsBr, on said amorphous carbon film and, optionally,
  - laminating method a polymeric film on the side of the amorphous carbon film not covered by said phosphor.
- 31.(original) A method according to claim 29, wherein before said step of vacuum depositing a storage phosphor layer on said amorphous carbon film a step of applying a specularly reflecting layer on said amorphous carbon film is included.
- 32.(original) A method according to claim 30, wherein before said step of vacuum depositing a storage phosphor layer on said amorphous carbon film a step of applying a specularly reflecting layer on said amorphous carbon film is included.
- 33.(currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on



~~Use in mammography of~~ a screen or panel according to claim

1.

34. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim

2.

35. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim

3.

36. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim

4.

37. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and

capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim  
5.

38.(currently amended) A method of obtaining a mammographic  
image comprising exposing an object to x-radiation and  
capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim  
6.

39.(currently amended) A method of obtaining a mammographic  
image comprising exposing an object to x-radiation and  
capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim  
7.

40.(currently amended) A method of obtaining a mammographic  
image comprising exposing an object to x-radiation and  
capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim  
8.

41. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 9.

42. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 10.

43. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 11.

44. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 12.

45. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 13.

46. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 14.

47. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 15.

48. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 16.

49. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 17.

50. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 18.

51. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 19.

52. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 20.

53. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 21.

54. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 22.

55. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 23.

56. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 24.

57. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 25.

58. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 26.

59. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 27.

60. (currently amended) A method of obtaining a mammographic image comprising exposing an object to x-radiation and capturing said x-radiation passing through said object on  
~~Use in mammography of~~ a screen or panel according to claim 28.

61.(new) A method for exposing an object to X-rays comprising the steps of:

- providing an X-ray machine including an X-ray tube equipped for emitting X-rays with an energy lower than or equal to 70 keV and a phototimer coupled to said X-ray tube for switching said tube on and off in accordance with an X-ray dose in the range from 0.75 up to 0.85 mR reaching said phototimer,
- placing an object between said X-ray tube and said phototimer,
- placing a cassette with a binderless storage phosphor panel or screen between said object and said phototimer and
- activating said X-ray tube for exposing said object, said cassette and said phototimer until said phototimer switches said X-ray tube off, wherein said binderless storage phosphor panel comprises on a support (2) having a layer of amorphous carbon (23) with a thickness between 500  $\mu\text{m}$  and 2000  $\mu\text{m}$ , and a vacuum deposited phosphor layer (1) having a needle shaped CsBr:Eu phosphor, wherein amounts of Eu are in the range of from 100 up to 400 p.p.m. versus CsBr.



- 62.(new) Method according to claim 61, wherein amounts of Eu are in the range of from 100 up to 200 p.p.m. versus CsBr.
- 63.(new) Method according to claim 61, wherein amounts of Eu are in the range from 150 to 180 p.p.m. versus CsBr.
- 64.(new) Method according to claim 61, wherein said support further includes a reflective auxiliary aluminum layer (22) with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .
- 65.(new) Method according to claim 62, wherein said support further includes a reflective auxiliary aluminum layer (22) with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .
- 66.(new) Method according to claim 63, wherein said support further includes a reflective auxiliary aluminum layer (22) with a thickness between 0.2  $\mu\text{m}$  and 200  $\mu\text{m}$ .
- 67.(new) Method according to claim 61, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.

- 68.(new) Method according to claim 62, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 69.(new) Method according to claim 63, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 70.(new) Method according to claim 64, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 71.(new) Method according to claim 65, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 72.(new) Method according to claim 66, wherein said support further includes a protective auxiliary layer (21) between said reflective auxiliary layer and said phosphor layer.
- 73.(new) Method according to claim 67, wherein said protective auxiliary layer (21) is a layer of parylene wherein said

parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

74.(new) Method according to claim 68, wherein said protective auxiliary layer (21) is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

75.(new) Method according to claim 69, wherein said protective auxiliary layer (21) is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

76.(new) Method according to claim 70, wherein said protective auxiliary layer (21) is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

77.(new) Method according to claim 71, wherein said protective auxiliary layer (21) is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

78.(new) Method according to claim 72, wherein said protective auxiliary layer (21) is a layer of parylene wherein said parylene is selected from the group consisting of parylene C, parylene D and parylene HT.

79.(new) Method according to claim 61, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

80.(new) Method according to claim 62, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

81.(new) Method according to claim 63, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

82.(new) Method according to claim 64, wherein said support further includes a polymeric auxiliary layer (24) farther

away from said phosphor layer than said layer of amorphous carbon.

83.(new) Method according to claim 65, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

84.(new) Method according to claim 66, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

85.(new) Method according to claim 67, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

86.(new) Method according to claim 68, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

87.(new) Method according to claim 69, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

88.(new) Method according to claim 70, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

89.(new) Method according to claim 71, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

90.(new) Method according to claim 72, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

91.(new) Method according to claim 73, wherein said support further includes a polymeric auxiliary layer (24) farther

away from said phosphor layer than said layer of amorphous carbon.

92.(new) Method according to claim 74, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

93.(new) Method according to claim 75, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

94.(new) Method according to claim 76, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

95.(new) Method according to claim 77, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

96.(new) Method according to claim 78, wherein said support further includes a polymeric auxiliary layer (24) farther away from said phosphor layer than said layer of amorphous carbon.

97.(new) Method according to claim 61, wherein said method is a mammographic application method.